

Work Order ID 140951

140951

Page 1

January 26, 2016 11:15:20 AM

Item ID: 646.4001

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 3/7/2016 Req'd Qty: 1.00

1

Customer:

Reference:

120160126

Approvals: Process Plan: SU

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

646.4000

EC

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP 646.4001

DAS
27
9-89

MAR 17 2016

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

DAS
27
9-89

FEB 09 2016

DAS
28
9-89

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.00

Quality Control

DAS
27
9-89

MAR 17 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Work Order ID 140951***140951***

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Item ID: 646.4001 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: AS350 Cable Cutter System
Start Date: 1/26/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 3/7/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Packaging	0.00							
130									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP 646.4001 Location: _____								
	Sold								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

BAS
27
9-59
MAR 17 2016

MW **MAR 17 2016**

MW **MAR 17 2016**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					

Root Cause		FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐					
Misidentified ☐	Past Due ☐						

Picklist Print

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Work Order ID: 140951

140951

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP REV:A 12.10.23 NEW ISSUE DD VERF:JLM
IPP REV:B 15.01.08 AS PER DWG REV.B DD VERF:JLM IPP
REV:C 16.01.07 AS PER DWG REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

646.3301		Manufactured	No			110	Each	4.0000	1	1			
646.3301													
Upper Cutter Assy													

DAS
27
9-89

Location

cck018

Loc Qty

4

Loc Code

136497

2

140115

2

646.3001		Manufactured	No			110	Each	0.0000	1	1			
----------	--	--------------	----	--	--	-----	------	--------	---	---	--	--	--

646.3001

Lower Cutter Assy

DAS
27
9-89

646.2910		Manufactured	No			110	Each	2.0000	1	1			
----------	--	--------------	----	--	--	-----	------	--------	---	---	--	--	--

646.2910

Deflector

DAS
27
9-89

Location

CCK050

Loc Qty

2

Loc Code

136136

2

646.3810		Manufactured	No			110	Each	0.0000	2	2			
----------	--	--------------	----	--	--	-----	------	--------	---	---	--	--	--

646.3810

Bracket

DAS
27
9-89

646.3510		Manufactured	No			110	Each	0.0000	1	1			
----------	--	--------------	----	--	--	-----	------	--------	---	---	--	--	--

646.3510

Strut

DAS
27
9-89

646.3511		Manufactured	No			110	Each	0.0000	1	1			
----------	--	--------------	----	--	--	-----	------	--------	---	---	--	--	--

646.3511

Strut

DAS
27
9-89

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Work Order ID: 140951

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Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

647.0112

Manufactured No

110 Each

55.0000

2 2

DAS
6
9-89

647 0112

Strut Bracket

DAS
27
9-89

Location

Loc Qty

Loc Code

DAS
28
9-89

CCK107

55

M130388

55

2

647.7703

Manufactured No

110 Each

8.0000

2 2

DAS
6
9-89

647 7703

Strut Assembly

DAS
27
9-89

Location

Loc Qty

Loc Code

FEB 27 2016

CCK114

8

139295

8

NAS1149F0332P

Purchased No

110 Each

2,571.000

138 138

DAS
6
9-89

NAS1149F0332P

Washer

DAS
27
9-89

Location

Loc Qty

Loc Code

DAS
28
9-89

GA

396

m133709

396

ST260a

1500

m134055

1500

ST262

675

m133709

4

m133938

671

144

16.02.16

NAS1149F0332P

2x

M12 4555

FEB 29 2016

DAS
28
9-89

DAS

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9-89

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Work Order ID: 140951

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Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

MS21042L3

Purchased

No

110

Each

2,723.000

61

61

DAS

6

9-89

MS21042L3

Nut

Location

Loc Qty

Loc Code

CCK007

2000

m134039

2000

FP001

163

m133790

163

GA

195

m133790

195

ST304

365

m133790

365

FEB 29 2016

DAS

28

9-89

646.3110

Manufactured

No

110

Each

2.0000

1

1

DAS

6

9-89

646.3110

Channel

Location

Loc Qty

Loc Code

cck020

2

136492

2

646.3710

Manufactured

No

110

Each

9.0000

1

1

DAS

6

9-89

646.3710

Doubler

Location

Loc Qty

Loc Code

CCK002

9

127550

9

646.3210

Manufactured

No

110

Each

4.0000

1

1

DAS

6

9-89

646.3210

Support

Location

Loc Qty

Loc Code

cck020

4

136217

4

MAR 08 2016

DAS

28

9-89

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Page 4

Work Order ID: 140951

140951

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

646.3713 Manufactured No

110 Each 12.0000 1

646 3713

Gusset

DAS
27
9-89

Location

Loc Qty

Loc Code

cck105

12

138216

12

MS24694-S51

Purchased No

110 Each 231.0000

MS24694-S51

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

ST284

231

m130928

31

m133990

200

AN3-13A

Purchased No

110 Each 36.0000

AN3-13A

Bolt

DAS
27
9-89

Location

Loc Qty

Loc Code

CA

3

m129682

3

GA

20

m127070

20

ST349

13

m131305

13

DAS

6 DAS
9-89 28
9-89

FEB 27 2016

DAS
6 68-6
9-89 82
SVD

DAS
6 68-6
9-89 82
SVD

FEB 27 2016

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Work Order ID: 140951

Parent Item: 646.4001

Parent Item Name: AS350 Cable Cutter System

140951

646 4001

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

AN3-4A Purchased No 110 Each 332.0000 10 10
AN3-4A ****** **DAS**
 Bolt 6
 9-89
 DAS
 27
 9-89

Location	Loc Qty	Loc Code
over003	250	
m133990	250	
ST350	82	
m129682	10	
m133694	72	

CR3213-5-3 Purchased No 110 Each 116.0000 14 14
CR3213-5-3 ****** **DAS**
 Cherry Rivet 6
 9-89
 DAS
 27
 9-89
 M132677

Location	Loc Qty	Loc Code
ST319	116	
m130388	16	
m132763	100	

MS20470AD5-5.5 Purchased No 110 Each 1,070.000 8 8
MS20470AD5-5 5 ****** **DAS**
 Rivet 6
 9-89
 DAS
 27
 9-89

Location	Loc Qty	Loc Code
ST309	1070	
123425	79	
m134063	991	

646.3711 Manufactured No 110 Each 20.0000 1 1
646 3711 ****** **DAS**
 Clip 6
 9-89
 DAS
 27
 9-89

Location	Loc Qty	Loc Code
cck105	20	
120626	20	

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Work Order ID: 140951

Parent Item: 646.4001

Parent Item Name: AS350 Cable Cutter System

140951

646 4001

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

646.3712	Manufactured	No	110	Each	10.0000	1		DAS 6 9-89
646 3712								
Clip								
DAS 27 9-89								
	<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
	cck105		10					
	120630		10					
646.3811	Manufactured	No	110	Each	6.0000	1		DAS 6 9-89
646 3811								
Radius Block								
DAS 27 9-89								
	<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
	CCK106		6					
	122938		6					
AN3-6A	Purchased	No	110	Each	402.0000	2		DAS 6 9-89
AN3-6A								
Bolt								
	<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
	over003		300					
	M133932		125					
	M134055		175					
	ST306		2					
	M131305		2					
	ST349		100					
	M133561		100					
MS24694-S55	Purchased	No	110	Each	129.0000	1		DAS 6 9-89
MS24694-S55								
Screw								
DAS 27 9-89								
	<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
	ST283		129					
	m132803		46					
	m133988		83					

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Work Order ID: 140951

Parent Item: 646.4001

Parent Item Name: AS350 Cable Cutter System

140951

646 4001

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

646.3610	Manufactured	No	110	Each	0.0000	1	DAS 6 28 9-89
646 3610						1	
Filler							

646.3714	Manufactured	No	110	Each	2.0000	1	DAS 6 28 9-89
646 3714						1	
Gusset							

MS20470AD5-6	Purchased	No	110	Each	960.0000	8	DAS 6 28 9-89
MS20470AD5-6						8	
RIVET							

646.3812	Manufactured	No	110	Each	0.0000	2	DAS 6 28 9-89
646 3812						2	
Gusset Bracket							

AN3-3A	Purchased	No	110	Each	267.0000	4	DAS 6 28 9-89
AN3-3A						4	
Bolt							

Picklist Print

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Work Order ID: 140951

Parent Item: 646.4001

Parent Item Name: AS350 Cable Cutter System

140951

646 4001

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

AN3-5A Purchased No

110 Each 222.0000 2 2

AN3-5A

Bolt

DAS

6

9-89

DAS

28

9-89

FEB 29 2016

Location

Loc Qty

Loc Code

FP001

24

m133686

24

ST350

198

m133686

78

m134055

120

646.3715 Manufactured No

110 Each 17.0000 2 2

646 3715

Strut Doubler

DAS

6

9-89

DAS

28

9-89

Location

Loc Qty

Loc Code

cck105

17

139892

17

MS27039-1-12 Purchased No

110 Each 185.0000 6 6

MS27039-1-12

Screw

DAS

6

9-89

DAS

28

9-89

Location

Loc Qty

Loc Code

over006

100

m133988

100

ST280

85

m133483

85

646.3716 Manufactured No

110 Each 6.0000 1 1

646 3716

Gauge Bracket

FEB 29 2016

DAS

28

9-89

Location

Loc Qty

Loc Code

cck105

6

136410

6

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Work Order ID: 140951

140951

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

MS20426AD5-7

Purchased

No

110

Each

1,057.000

2

2

DAS
6
9-89

MS20426AD5-7

RIVET

Location

Loc Qty

Loc Code

ST311

1057

M132767

14

M133922

1043

DAS
28
9-89

MS24694-S54

Purchased

No

110

Each

156.0000

2

2

DAS
6
9-89

MS24694-S54

SCREW

Location

Loc Qty

Loc Code

ST284

156

m133134

56

m134063

100

DAS
28
9-89

MS27039-1-21

Purchased

No

110

Each

371.0000

4

4

DAS
6
9-89

MS27039-1-21

Screw

Location

Loc Qty

Loc Code

over006

241

m127904

241

ST280

130

m127904

130

DAS
28
9-89

MS27039-1-20

Purchased

No

110

Each

170.0000

2

2

DAS
28
9-89

MS27039-1-20

Screw

Location

Loc Qty

Loc Code

ST280

170

124326

170

DAS
6
9-89

DAS
27
9-89

FEB 29 2016

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Work Order ID: 140951

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Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-19

Purchased

No

110

Each

333.0000

22

22

MS27039-1-19

Screw

DAS

9-89

9-89

FEB 29 2016

Location

Loc Qty

Loc Code

over006

250

m133932

100

m134055

150

ST280

83

m133938

83

646.3717

Manufactured

No

110

Each

1.0000

1

1

646 3717

Doubler

**

138175

DAS

6

9-89

DAS

28

9-89

Location

Loc Qty

Loc Code

cck105

1

120633

1

646.3718

Manufactured

No

110

Each

11.0000

2

2

646 3718

Custom Washer

**

140788

DAS

6

9-89

DAS

28

9-89

Location

Loc Qty

Loc Code

cck105

11

136223

11

646.3719

Manufactured

No

110

Each

17.0000

2

2

646 3719

Doubler

**

DAS

6

9-89

DAS

28

9-89

Location

Loc Qty

Loc Code

cck105

17

139893

17

FEB 27 2016

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Work Order ID: 140951

140951

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

110

Each

146.0000

2

2

MS27039-1-10

SCREW

**

134166

DAS
6
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CA

41

m128635

41

GA

50

m129541

50

ST280

55

m132677

55

AN3-11A

Purchased

No

110

Each

173.0000

10

10

AN3-11A

Bolt

**

Location

Loc Qty

Loc Code

over003

100

m133992

100

ST349

73

m133561

73

DAS
27
9-89

600.0990

Purchased

No

110

Each

23.0000

1

1

600.0990

Magnabond 6398 Part A

**

FEB 29 2016
DAS
6
28
9-89

Location

Loc Qty

Loc Code

CA2

12

M133800

12

PKG

11

M133938

11

DAS
27
9-89

DAS
6
28
9-89

07/15/2016

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Work Order ID: 140951

140951

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

600.0991 Purchased No

110 Each 23.0000 1

600 0991

MAGNOBOND 6398 PART B

**

DAS
6 28
9-89

Location

Loc Qty

Loc Code

CA2

12

m133800

12

PKG

11

m133938

11

600.1012 Purchased No

110 Each 23.0000 1

600 1012

Sealant PR1425B2 (#654 sem)

**

DAS
6 28
9-89

Location

Loc Qty

Loc Code

cck017

22

m133800

6

m133938

8

m133992

8

cck018

1

m131364

1

10/30/2015

600.0129 Purchased No

110 f 493.0000 8

600 0129

VHB TAPE 75935A651

**

DAS
6 28
9-89

Location

Loc Qty

Loc Code

CCK095

493

m127920

293

m131311

200

600.1013 Purchased No

110 Each 845.0000 5

600 1013

021200-3M TAPE PRIMER 94 PRIMER 24216

**

DAS
6 28
9-89

Location

Loc Qty

Loc Code

CCK095

845

m131145

845

6/15/2016

January 26, 2016 11:15:28 AM

Shop Packet Print

Page 13

Picklist Print

January 26, 2016 11:15:28 AM

Page 14

Work Order ID: 140951

140951

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

646.3910	Manufactured	No	110	Each	28.0000	4	4	DAS	
646 3910						**	140772x1	6	DAS
Shim								9-89	28
									9-89

			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>				
			CCK106	28					
			136478	28					
646.3911	Manufactured	No		110	Each	60.0000	1	1	
646 3911						**			DAS
Shim									6
									9-89
									28
									9-89

			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>				
			cck104	17					
			126229	17					
			CCK106	43					
			126059	43					
646.3912	Manufactured	No		110	Each	12.0000	4	4	
646 3912						**	140238		DAS
Shim									6
									9-89
									28
									9-89

			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>				
			CCK106	12					
			123143	2					
			124501	10					
646.3913	Manufactured	No		110	Each	99.0000	1	1	
646 3913						**			DAS
Shim									6
									9-89
									28
									9-89

DAS
27
9-89

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
cck023aq	81	
126060	81	
CCK106	18	
124108	18	

FEB 27 2016 DAS
28
9-89

Picklist Print

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Page 15

Work Order ID: 140951

Parent Item: 646.4001

Parent Item Name: AS350 Cable Cutter System

140951

646 4001

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

AN3-12A

Purchased

No

110

Each

85.0000

2

AN3-12A

Bolt

DAS

6

9-89

28

9-89

Location

Loc Qty

Loc Code

GA

2

m129682

2

ST349

83

m133064

16

m133234

67

MS27039-1-16

Purchased

No

110

Each

294.0000

24

MS27039-1-16

Screw

DAS

6

9-89

28

9-89

Location

Loc Qty

Loc Code

ST280

294

m131317

8

mm134023

286

650.9201

Manufactured

No

110

Each

11.0000

2

650.9201

Eyelet Bracket Assembly

DAS

6

9-89

28

9-89

Location

Loc Qty

Loc Code

cck127

11

136606

11

AN44-5A

Purchased

No

110

Each

24.0000

2

AN44-5A

Eyebolt

DAS

6

9-89

28

9-89

Location

Loc Qty

Loc Code

ST339

24

m133790

12

m133990

12

DAS

27

9-89

FEB 09 2016

Picklist Print

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Page 16

Work Order ID: 140951

140951

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

AN665-34R

Purchased

No

110

Each

46.0000

2

2

AN665-34R

Clevis

**

DAS
6

9-89
DAS

28

9-89

Location

Loc Qty

Loc Code

ST330

46

M133523

26

M134029

10

st330

10

2

AN4C7A

Purchased

No

110

Each

104.0000

2

2

AN4C7A

BOLT

**

DAS
6

9-89
DAS

28

9-89

Location

Loc Qty

Loc Code

OVER002

20

m133523

20

ST340

14

m133363

14

ST345

70

m133790

20

m133990

50

2

NAS1149F0432P

Purchased

No

110

Each

1,588.000

4

4

NAS1149F0432P

WASHER

**

DAS
6

9-89
DAS

28

9-89

Location

Loc Qty

Loc Code

ST260a

1000

M133990

1000

ST262

463

M133938

463

st268

125

M132677

125

4

FEB 09 2016

Picklist Print

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Page 17

Work Order ID: 140951

Parent Item: 646.4001

Parent Item Name: AS350 Cable Cutter System

140951

646 4001

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Purchased

No

110

Each

3,610.000

2

2

MS21042L4

Locknut

**

DAS
28
9-89
6
9-89

Location

Loc Qty

Loc Code

FP001

41

m133363

41

GA

26

m127813

26

ST007

1500

m134055

1500

ST303

1946

m133769

1946

ST305

97

m130922

97

AN316C4R

Purchased

No

110

Each

77.0000

2

2

AN316C4R

NUT

**

DAS
28
9-89
6
9-89

Location

Loc Qty

Loc Code

ST331

77

m133234

43

m133523

34

MS21042-3

MS21042L3

Purchased

No

110

Each

18.0000

2

2

MS21042-3

Nut / use MS21042L3

**

DAS
28
9-89
6
9-89

Location

Loc Qty

Loc Code

ST304

18

M129682

18

DAS
27
9-89

FEB 09 2016

Picklist Print

January 26, 2016 11:15:28 AM

Page 18

Work Order ID: 140951

140951

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-0813

Purchased

No

110

Each

316.0000

2

2

MS27039-08-13

Screw

**

DAS
6 28
9-89 9-89

Location

Loc Qty

Loc Code

ST278

316

124326

316

MS21042-08

MS21042L08

Purchased

No

110

Each

33.0000

2

2

MS21042-08

USE MS21042L08

**

133922

DAS
6 28
9-89 9-89

Location

Loc Qty

Loc Code

ST304

25

122815

25

ST306

8

m130388

8

NAS1149FN832P

Purchased

No

110

Each

3,803.000

4

4

NAS1149FN832P

Washer

**

DAS
6 28
9-89 9-89

Location

Loc Qty

Loc Code

GA

2231

M133316

16

M133769

2215

ST262

1572

M133709

1572

MS24693-C278

Purchased

No

110

Each

70.0000

5

5

MS24693-C278

Screw

**

Location

Loc Qty

Loc Code

ST287

70

m133998

70

DAS
6 28
9-89 9-89
FEB 09 2016

January 26, 2016 11:15:28 AM

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Page 18

Picklist Print

Page 19

January 26, 2016 11:15:28 AM

Work Order ID: 140951

140951

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 1/26/2016

Required Date: 3/7/2016

Start Qty: 1.00

Required Qty: 1.00

646.9410

Manufactured No

110

Each

0.0000

0

1

646 9410

Shim

Shipped without Shims

HP-3-17

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DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPLICIT
WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

NOTES:

- 1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.
- 2 INSTALL F/N 14 WITH F/N 52 & 53.
- 3 3M VHB ADHESIVE TAPE .025" THICK X .50" WIDE
VENDOR: MCMASTER-CARR P/N 75935A651.
- 4 3M TAPE PRIMER 94, APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: R.S. HUGHES P/N 021200-24216.
- 5 REUSE FASTENERS FROM F/N 1.
- 6 USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.
- 7 AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.
- 8 INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE
SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78
SCREW IN PLACE OF F/N 17 SCREW.
- 9 NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY
REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 &
F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

5	5	5	78	601.3875	SCREW	MS24694554	
1	1	1	77	646.9410	SHIM	AN3-14FHB32P	
	4	4	76	601.2764	WASHER	MS21042-08	
	2	2	75	601.2973	LOCKNUT	MS27039-0813	
	2	2	74	601.2988	SCREW	MS21042-3	
	2	2	73	601.2943	LOCKNUT	AN316C4R	
	2	2	72	601.3128	NUT	MS21042-4	
	2	2	71	601.3209	LOCKNUT	AN46-7A	
	4	4	70	601.2638	WASHER	AN665-34R	
	2	2	69	601.2669	BOLT	AN44-5A	
	2	2	68	601.3119	CLEVIS		
	2	2	67	601.3121	EYE BOLT		
	2	2	66	650.9201	EYE BRACKET ASSY		
REF	REF	REF	65	647.5701	GPS MOUNT KIT		
		2	64	601.3151	WASHER	MS2149F0363P	
		2	63	601.2911	SCREW	MS24694553	
	24	24	62	601.2637	SCREW	MS27039-1-16	
2	2	2	61	601.2763	BOLT	AN3-12A	
	1	1	60	646.3913	SHIM		
	4	4	59	646.3912	SHIM		
	1	1	58	646.3911	SHIM		
	4	4	57	646.3910	SHIM		
	5	5	56	600.1013	PRIMER		
	8 FT	8 FT	55	600.0129	VHB TAPE		
	1	1	54	600.1012	SEALANT	PR-1425 CLASS B	
	1	1	53	600.0991	MAGNIBOND 6398 PART B		
	1	1	52	600.0990	MAGNIBOND 6398 PART A		
6	10	10	51	601.2826	BOLT	AN3-11A	
		2	50	646.3814	WIPER BRACKET		
		2	49	601.2910	SCREW	MS27039-1-18	
	2	2	48	601.1365	SCREW	MS27039-1-10	
	2	2	47	646.3719	DOUBLER		
		2	46	646.3718	CUSTOM WASHER		
	1	1	45	646.3717	DOUBLER		
	22	2	44	601.1948	SCREW	MS27039-1-19	
	2	2	43	601.1952	SCREW	MS27039-1-20	
	4	4	42	601.1956	SCREW	MS27039-1-21	
.4006	.4005	.4004	.4003	.4002	.4001	FIND #	PART #
							DESCRIPTION
							MATL
							SPEC.

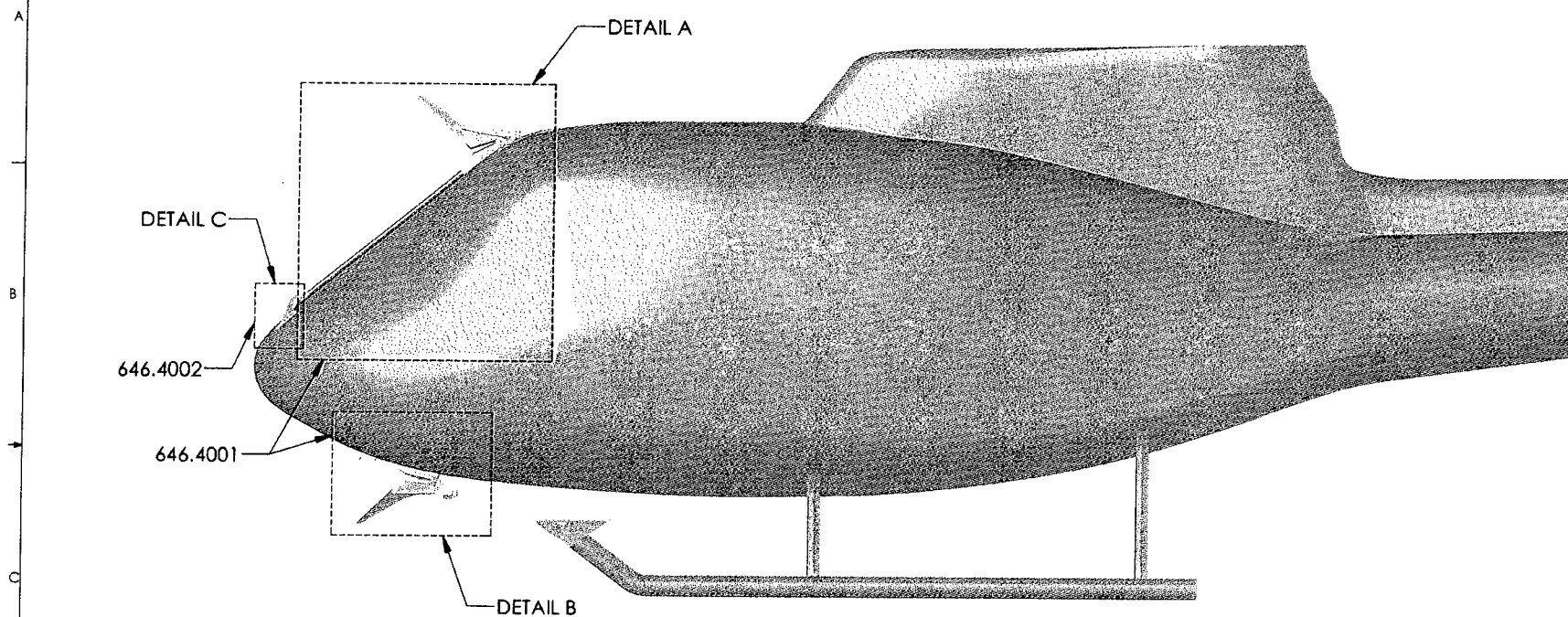
REV.	DESCRIPTION	DATE	APPROVED
A	INCORPORATED ECHS 02119, 02351, 02718 & 02745	02/08/2016	P. BRAVO
B	INCORPORATED ECH 03044, 03079 & 04731	11/04/2014	P. BRAVO
C	INCORPORATED ECH 05098	09/09/2015	P. BRAVO

		2	2	41	601.2829	SCREW	MS24694554
		2	2	40	601.2831	RIVET	MS20476AD5-7
		1	1	39	646.3716	GAUGE BRACKET	
		6	6	38	601.1953	SCREW	MS27039-1-12
	2		2	37	646.3715	STRUT DOUBLER	
2	2	2	2	36	601.2824	BOLT	AN3-5A
12	36		36	35	601.2277	RIVET	CCR24MS3-409
6	18		18	34	600.0795	NUTPLATE	MS27047-3
3	3		3	33	601.2565	RIVET	MS20470AD5-7
1	1		1	32	646.3813	STRUT BRACKET	
4	4		4	31	601.2822	BOLT	AN3-3A
2	2		2	30	646.3812	GUSSET BRACKET	
8	8		8	29	601.2564	RIVET	MS20470AD5-4
1	1		1	28	646.3714	GUSSET	
1	1		1	27	646.3610	FILLER	
3	3		3	26	601.2830	SCREW	MS24694555
2	2		2	25	601.2825	BOLT	AN3-6A
1	1		1	24	646.3811	RADIUS BLOCK	
1	1		1	23	646.3712	CLIP	
1	1		1	22	646.3711	CLIP	
8	8		8	21	601.2832	RIVET	MS20470AD5-5.5
14	14		14	20	601.2020	RIVET	CR3213-5-3
4	6	4	6	10	601.2823	BOLT	AN3-4A
1	1		1	18	601.2827	BOLT	AN3-13A
5	5		5	17	601.2912	SCREW	MS24694551
1	1		1	16	646.3713	GUSSET	
1	1		1	15	646.3210	SUPPORT	
1	1		1	14	646.3710	DOUBLER	
1	1		1	13	646.3110	CHANNEL	
14	10	8	53	6	61	12	601.1624
16	32	18	120	16	144	11	601.1607
							646.3410
							646.3411
							647.7703
							647.0112
							646.3511
							646.3510
							646.3810
							646.2910
							646.3001
							646.3301
X							646.4006
	X						646.4005
		X					646.4004
			X				646.4003
				X			646.4002
					X		646.4001
.4006	.4005	.4004	.4003	.4002	.4001	FIND #	PART #
							DESCRIPTION
							MATL
							SPEC.

QTY		PARTS LIST	
NEXT ASSY (S)		ORIGINAL DATE: 08-27-06 DRAWN BY: J. HURF CHECKED BY: P. BRAVO DART AEROSPACE 3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760) 724-5300 DART AEROSPACE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.010 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SRT CAGE CODE: 07M26 DWG. NO.: 646.4000 SCALE: NONE SHEET 1 OF 5	

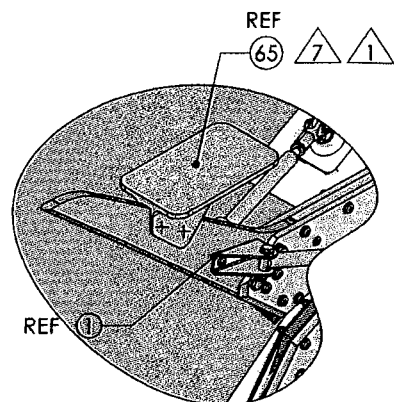
1 2 3 4 5 6 7 8

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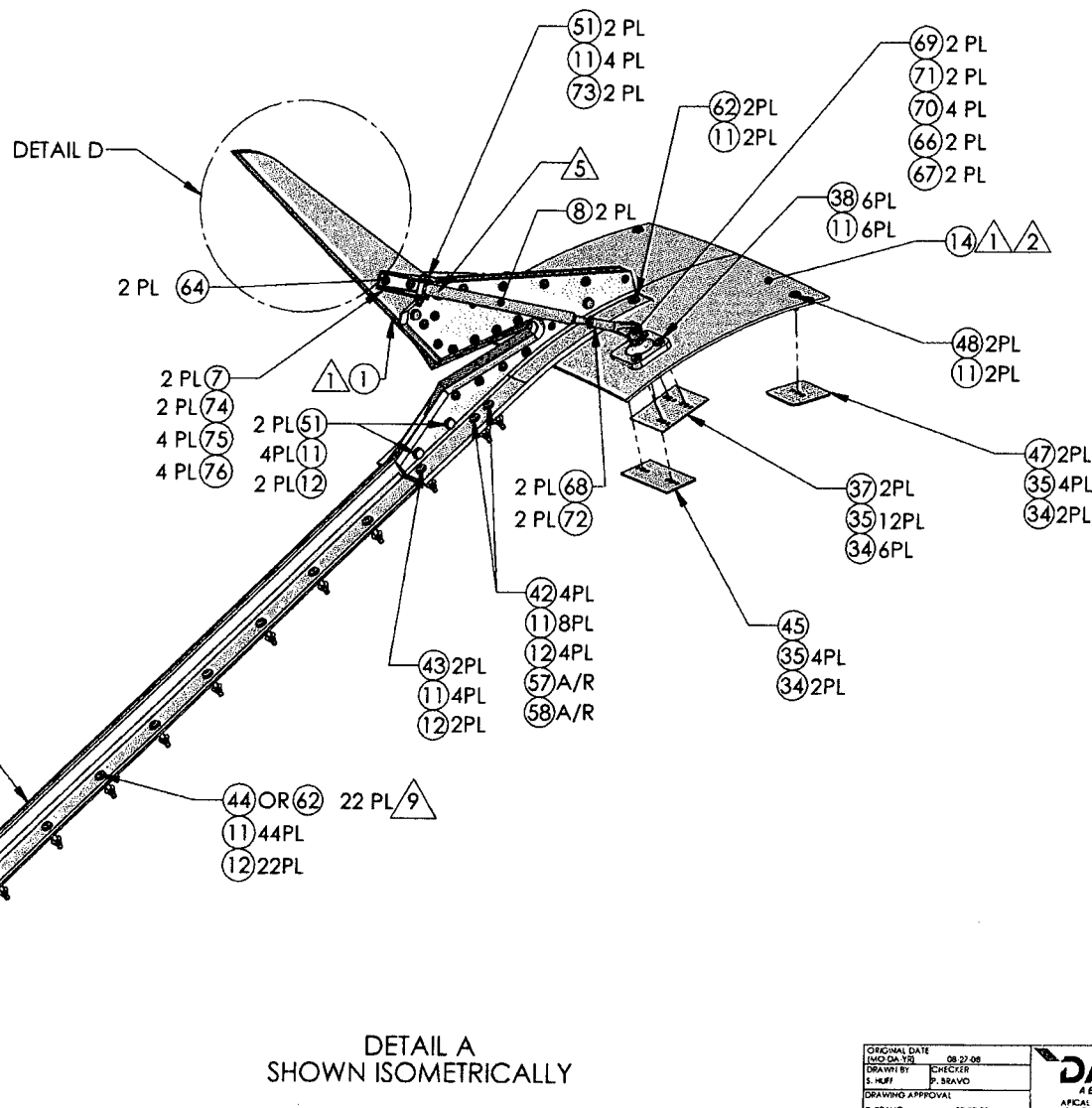


ORIGINAL DATE (MO-DA-YR) 08-27-08		DART 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760) 724-5300 APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
DRAWN BY S. HUFF			
DRAWING APPROVAL P. BRAVO			
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±0.10 3 PLACE DECIMALS ±0.05 ANGLES ± 5°			
SHEET B	CAGE CODE 07M16	DWG. NO. 646.4000	REV. C
SCALE NONE			SHEET 2 OF 5

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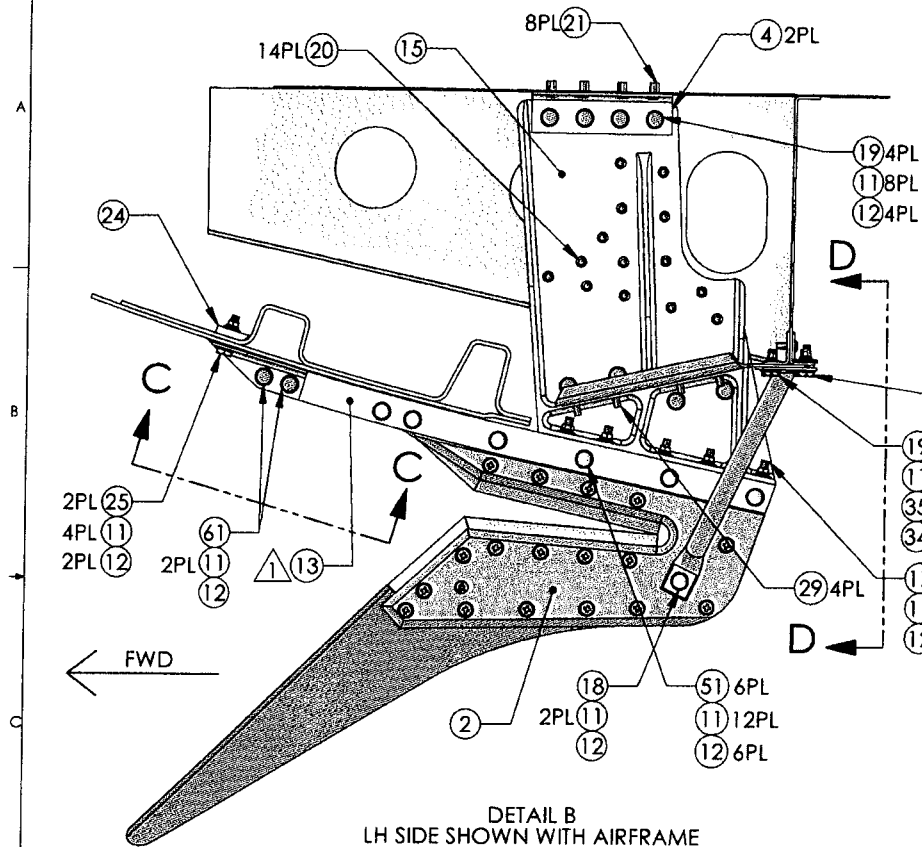
DETAIL D
TYPICAL GPS MOUNT KIT INSTALLATION



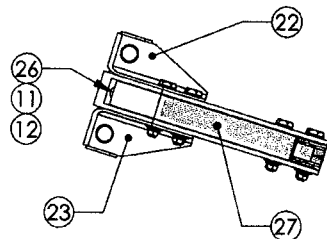
DETAIL A
SHOWN ISOMETRICALLY

ORIGINAL DATE 12/04/98	08-27-08	 DART AEROSPACE ARCAD INDUSTRIES INC. 3030 ENTERPRISE CT SUITE A VISTA, CA 92081 (760) 724-5300	
DRAWN BY E. ENICKER	P. BRAVO		
DRAWING APPROVAL P. BRAVO	08-27-08		
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±0.01 3 PLACE DECIMALS ±0.005 ANGLES ± .5°			
AS350 CABLE CUTTERS KIT			
SIZE	CAGE CODE	DWG. NO.	REV
B	07M26	646 4000	1
SCALE NONE		SHEET	3 OF 5

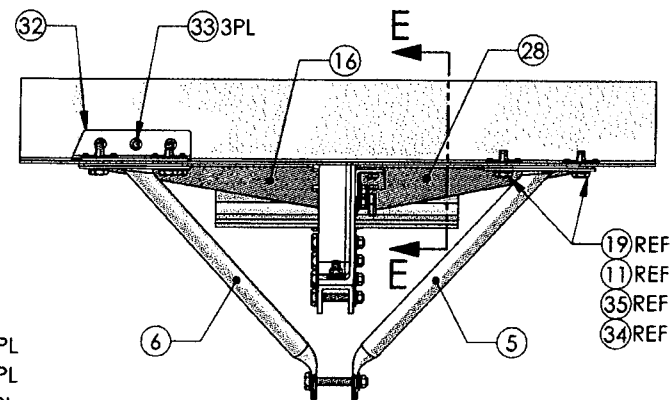
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPLICIT WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



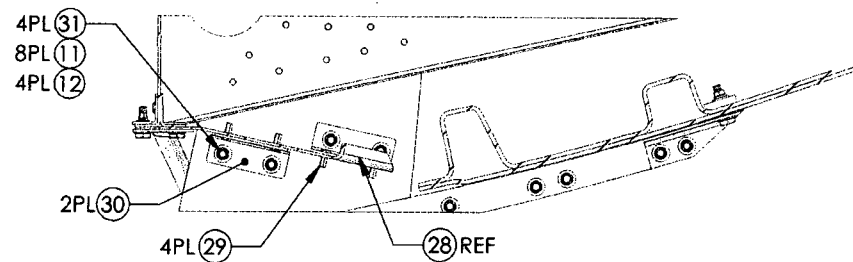
DETAIL B
LH SIDE SHOWN WITH AIRFRAME



SECTION C-C



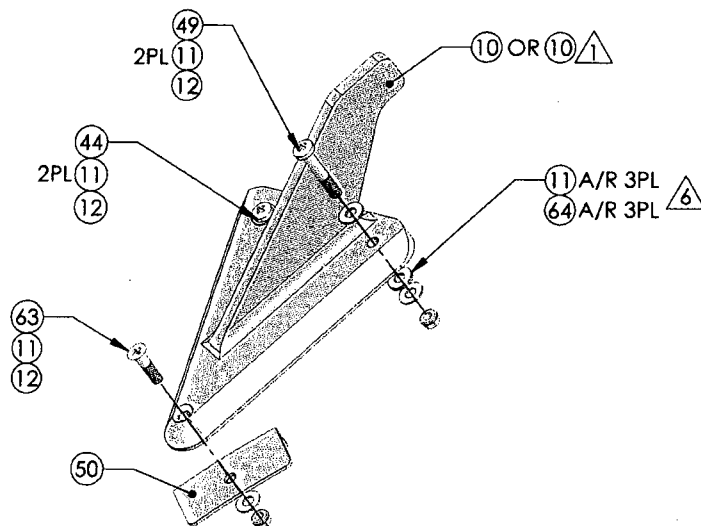
SECTION D-D
CUTTER HIDDEN FOR CLARITY



SECTION E-E

ORIGINAL DATE 08-27-08	 DART AEROSPACE	3030 ENTERPRISE CT. SUITE A
DRAWN BY S. HUFF		VISTA, CA. 92081
CHECKER P. BRAVO		(760)-724-5300
DRAWING APPROVAL P. BRAVO		
DATE 08-27-08		
CONTRACT NO.		
AS350 CABLE CUTTERS KIT		
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.010 3 PLACE DECIMALS ±.005 ANGLES ±.5°		
STD: B	CAGE CODE 07M26	DWG. NO. 646.4000
SCALE NONE		REV C
SHEET 4 OF 5		

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES
DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPLICIT
WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



DETAIL C
LH SHOWN EXPLODED
RH OPPOSITE

ORIGINAL DATE (MO-DA-YR) 06-27-08		DART 3030 ENTERPRISE CT., SUITE A AEROSPACE VISTA, CA. 92081 APICAL INDUSTRIES, INC. DBA DART AEROSPACE (760) 724-5300	
DRAWN BY S. HUFF P. BRAVO			
DRAWING APPROVAL P. BRAVO 06-27-08			
CONTRACT NO.		AS350 CABLE CUTTERS KIT	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.010 3 PLACE DECIMALS ±.005 ANGLES ±.5		SHEET 8 CAGE CODE 07MZ6 DWG. NO. 646.4000 SCALE NONE	REV. C SHEET 5 OF 5

NOTES:

2. INSTALL E/N 14 WITH E/R 52 & 53.

2. INSTALL E/N 14 WITH E/N 52 & 53.

4 3M TAPE PRIMER 94. APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: R.S. HUGHES P/N 021200-24216.

5 REUSE FASTENERS FROM F/N 1.

6 USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.

△ AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.

8 INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78 SCREW IN PLACE OF F/N 17 SCREW.

 NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 & F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

REFERENCE ONLY

UNINCORPORATED ECN(S)

05304

[illegible][illegible]



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

05304

SHEET 1 OF 1

DWG NO. 646.4000

REV: C

PREPARED BY J. BECKER

DATE: 02/04/16

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: AS350 CABLE CUTTERS KIT

APPROVED BY:

ENGR. *[Signature]*

MFG *[Signature]*

QC *[Signature]*

EFF. NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: REVISED F/N 12.

ECR:
N/A

ACTION ITEM:
1. N/A

REFERENCE ONLY

SHEET 1, BOM IS:

12	R	601.1624	8	16	LOCKNUT	MS21042L3	
F/N	TC	PART NUMBER	4006	4005	DESCRIPTION	MATERIAL	SPECIFICATION
			QTY				
DOCUMENTS EFFECTED:					CHANGE CATEGORY	DER REVIEW REQUIRED	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM					☐ MAJOR ☒ MINOR	☐ YES ☒ NO	